

CLAIMS

What is claimed is:

1. A transducer assembly, comprising:
a transducer;
5 a flexible circuit element, wherein said transducer is coupled to said flexible circuit element; and
a transducer seal, wherein said transducer seal seals said transducer when said transducer seal is positioned between a cover and said flexible circuit element.
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2. The transducer assembly according to claim 1, wherein said flexible circuit element is coupled to a display and a circuit board, said display, said circuit board, said transducer, said flexible circuit element and said transducer seal being housed within a telecommunications device.
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3. The transducer assembly according to claim 2, wherein said circuit board includes a zero insertion force connector for receiving said flexible circuit element.
- 20 4. The transducer assembly according to claim 1, further comprising an extension of a lightguide, at least a portion of said flexible circuit element being positioned on and secured to said extension of said lightguide.

5. The transducer assembly according to claim 4, wherein said extension of said lightguide is positioned above a circuit board housed in a telecommunications device and wherein at least a portion of at least one circuit element is mountable on said circuit board in an area that is below said extension of said lightguide.

6. The transducer assembly according to claim 4, wherein said cover comprises a housing and a bezel, said housing engages said bezel and said lightguide engages said housing, wherein when said lightguide engages said housing and said housing engages said bezel, said transducer seal is positioned against said housing and said bezel.

7. The transducer assembly according to claim 6, wherein said transducer seal comprises a front portion having a first rim and a back portion having a second rim.

8. The transducer assembly according to claim 7, wherein when said transducer seal is positioned against said housing and said bezel, said first rim of said front portion of said transducer seal engages said bezel with a sealing interference fit.

9. The transducer assembly according to claim 7, wherein when said transducer seal is positioned against said housing and said lightguide

engages said housing, said second rim of said back portion of said transducer seal engages said flexible circuit element with a sealing interference fit.

10. The transducer assembly according to claim 1, wherein said
5 transducer includes at least one spring contact for coupling said transducer to said flexible circuit element.

11. The transducer assembly according to claim 1, wherein said
transducer seal comprises an aperture for receiving said transducer, a plate
10 that covers a first end of said aperture and a first rim.

12. The transducer assembly according to claim 11, wherein at least
a portion of said first rim extends above said plate.

15 13. The transducer assembly according to claim 11, wherein when
said transducer is inserted into said aperture, a bottom surface of said first
rim of said transducer seal engages said transducer with a sealing
interference fit and an inner surface of said aperture of said transducer seal
engages said transducer with a sealing interference fit.

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14. The assembly according to claim 1, wherein said transducer
seal is constructed of at least one of rubber and plastic.

15. The transducer assembly according to claim 1, wherein said seal that is formed prevents high audio leakage through said transducer assembly.

5 16. The transducer assembly according to claim 5, wherein said extension of said lightguide includes at least one leg, said leg being positioned against a surface of said circuit board for supplementally supporting said lightguide.

17. A transducer assembly, comprising:
- a transducer;
 - a flexible circuit element, wherein said transducer is coupled to
 - 5 said flexible circuit element;
 - an extension of a lightguide, wherein at least a portion of said flexible circuit element is positioned on and secured to said extension of said lightguide; and
 - a transducer seal, wherein said transducer seal seals said
 - 10 transducer when said transducer seal is positioned between a cover and said flexible circuit element.

18. A method for producing a transducer assembly, comprising the steps of:

- 5 providing a transducer and a flexible circuit element;
 coupling the transducer to the flexible circuit element; and
 positioning a transducer seal between a cover and the flexible
circuit element to seal the transducer.

10 19. The method according to claim 18, further comprising the steps
of:

- providing an extension of a lightguide; and
 securing the flexible circuit element to the extension of the
lightguide.

15 20. The method according to claim 19, further comprising the step
of positioning the lightguide above a circuit board housed in a
telecommunications device, wherein at least a portion of at least one circuit
element is mountable on the circuit board in an area that is below the
extension of the lightguide.